

# CHAPTER 8 – MULTIMODAL PLANNING<sup>1</sup>

## 8.1 Planning

Transportation has a profound effect on the character of a community and affects access to jobs, education, recreation, health and wellness opportunities, and goods and services. WSDOT’s strategic plan places an emphasis on Modal Integration, with a goal to “Optimize existing system capacity through better interconnectivity of all transportation modes.” A multimodal approach to transportation system capacity identifies ways to address problems and improve system performance. WSDOT seeks to foster integrated multimodal planning in local, regional, and state planning efforts through the framework provided below.

### 8.1.1 Which Transportation Modes Should Cities and Counties Address in Their Plans?

Cities and counties should plan for all transportation modes available in their communities, such as walking, biking, driving, sharing a ride, or taking a bus, streetcar, train, boat, ferry, or airplane. They should also consider the needs of different types of travelers, such as commuters, students, tourists, farmers, freight haulers, and people with disabilities.

### 8.1.2 What Are the Benefits of Planning for All Modes?

Planning for all the ways people travel improves people’s transportation choices and their ability to access jobs, shopping, health care, and other services efficiently and safely.

Because travelers typically use more than one mode to make a trip, connecting the modes is also important. For example, bus riders are pedestrians for a portion of their travel (e.g., walking to the bus stop from their houses). Park-and-ride lots that serve vanpools and carpools, railways that regionally connect people with places and airports that provide access to more distant locations are all important pieces of the overall transportation system. Safe and efficient transportation choices are especially important to youth, seniors, people with low income, and people with disabilities.

### 8.1.3 How Is the Planning for All Modes Integrated?

There are many ways to integrate planning for walking, biking, driving, transit, and marine and air transport. Outlined in the following pages are some options. Cities and counties should select the approaches that best fit the context of their communities.

#### *Invite Partners*

Invite partners responsible for or interested in other transportation modes into the planning process. For example, encourage walking and biking advocates, local health and community planning departments, active living groups, regional and state transportation agencies, advocates for seniors and people with disabilities, schools, transit agencies, trucking associations, and private transportation providers to be

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<sup>1</sup> *Working Together to Support Transportation Efficient Communities*, September 2015

involved in the planning process. Review partners' visions, policies, and plans to identify conflicts and opportunities to improve connections.

### *Adopt Policy Goals*

Engage the public and other stakeholders to develop goals and adopt policies that support an integrated, multimodal network. Here are some examples:

- Develop a network of walking and biking facilities that connect residential, employment, community, and regional destinations, rather than standalone or spot improvements.
- Provide easily identifiable, safe, comfortable, efficient, and universally accessible connections between modes.
- Connect walking and biking facilities to transit stops, transit stations, rail stations, ferry terminals, airports, and park-and-ride lots.
- Reduce the time it takes walkers, bikers, and transit riders to reach their destinations by reducing crossing distances, increasing safe crossing opportunities, providing strategic shortcuts, and implementing pedestrian-prioritized signal timing at crosswalks.
- Provide adequate amenities to improve safety and comfort at transit stops, transit stations, rail stations, ferry terminals, airports, and park-and-ride lots (e.g., covered bike parking, street furniture, lighting, landscaping, shade, traffic calming).
- Work with transit agencies and private transportation providers to provide frequent, reliable transit, shuttle, and bike/car share and bike/car rental services at rail stations, ferry terminals, airports, and park-and-ride lots.
- Support the development and expansion of commute trip reduction incentive programs to encourage modes of transport other than driving alone.
- Establish local programs to educate citizens on alternatives to automobile use, encourage carpooling and use of transit, and promote walking and bicycling.
- Provide signage and wayfinding (e.g., transit signage and maps, time-to-destination signage, real-time signage adjacent to stations and terminals, smart technologies, in-pavement markings).
- Encourage economic development opportunities and aviation-related uses adjacent to airports.
- Improve economic vitality by connecting people and goods to regional markets.
- Ensure buses and trains are equipped to transport bikes, especially in dense urban areas.
- Address Americans with Disabilities Act requirements when planning walking and biking improvements.
- Manage demand and improve transportation system operations to optimize the performance of existing multimodal transportation infrastructure and services.

### *Select Performance Measures*

Select performance measures that balance available or planned transportation modes and evaluate the best investments across the network.

- Identify a limited set of key measures to best support goals and objectives, guide investment decisions, and evaluate progress.
- Include both mode-neutral and mode-specific performance measures to gauge total effects on the system and specific deficiencies in individual modes.

- Build on required performance-based approaches, such as state asset management and safety plans, regional congestion management processes, and transit asset management and safety plans.
- Include measures that address both freight and people movement.
- Include measures that consider the mobility and accessibility needs of different members of the community.
- Engage the public and stakeholders to identify issues residents care about and ensure measures are easy to understand and resonate with the community.
- Establish a specific performance target for each measure.
- Collect baseline data and establish an appropriate time frame for evaluation.
- Provide context for performance results. Tell a story and combine data with pictures and interviews to explain performance results.
- Identify and remove institutional and organizational obstacles to performance-based decision making.

### *Map Existing Infrastructure and Collect Data*

Use models, maps, field surveys, and other data collection tools to identify connection opportunities for each transportation mode and gaps in the multimodal network.

- Map walking and biking facilities (e.g., bike lanes, shared use paths, paved road shoulders, sidewalks, crossings), transit and ferry connections (transit stops and routes, transit stations, and ferry terminals), rail stations, airports, and park-and-ride lots.
- Map the street grid and identify freight routes and roadways with high vehicular speeds that would cause safety concerns for bikers and walkers.
- Identify 1/2-mile walk sheds and 3-mile bike sheds around transit and rail stations, ferry terminals, and airports.
- Identify existing state, regional, and local designated walking, biking, transit, rail, and freight routes, including high frequency transit corridors.
- Identify points of interest likely to generate walking, biking, and transit trips (e.g., schools, health care facilities, event centers, public institutions, parks, large employers).
- Identify locations with a history of collisions, identified by mode.
- Collect statistics on average block length, intersection density, walk score, density, employment, journey to work, and health.
- Assess the existing condition and characteristics of walking and biking facilities, transit stops, transit and rail stations, ferry terminals, and airports.
- Overlay the maps to identify areas that lack connectivity or present other obstacles to travel.
- Identify opportunities to link transportation facilities in your jurisdiction to those in adjacent jurisdictions.

### *Identify Strategies and Analyze Alternatives*

- Designate which modes have priority on which transportation facilities in the overall transportation network.
- Allocate street space and adjust traffic operations based on modal priorities.

- Evaluate how modal priorities will affect other modes. For example, design roadways prioritized for bikers and walkers for slower vehicle speeds. Conversely, accommodate bikers and walkers on parallel routes where freight is a roadway priority.
- Identify supportive transportation system management and operations strategies, such as traffic management and channelization, intersection modifications, access management, improved traffic control devices, and parking management.
- Prioritize walking, biking, and transit improvements for
  - Corridors designated as walking, biking, or transit priorities
  - Locations with a history of safety problems
  - Locations expected to generate walking, biking, and transit trips, especially those serving youth, seniors, people with low-incomes, and disabled individuals (e.g., schools and medical facilities)
  - Areas where the community design is supportive (e.g., land zoned for mixed-use and compact development)
  - Transit corridors with frequent service (15 minutes or less)
  - Urban centers, high employment centers, high-capacity transit connections, and infill areas
- Involve the public in identifying and ranking different solutions, especially engaging underrepresented populations.

### *Implement the Plan*

- Develop a work plan and agreements with other agencies to implement solutions.
- Form an implementation advisory committee.
- Implement walking and biking improvements in conjunction with the development of other roadway and transit improvements.
- Develop a plan to communicate with customers (e.g., brand frequent transit services, provide signage and wayfinding, distribute walk and bike route maps).
- Provide real-time travel information to the public for all modes.

## 8.2 Practical Solutions<sup>2</sup>

Practical Solutions is a modern, performance-based approach to transportation decision-making. This data-driven approach uses the latest tools and performance measures to support decision making and considers not just roads, but the entire transportation system. Low-cost efficiencies in operating highways, ferries, transit, and rail and reducing travel demand save money and avoid building costly new capacity.

Community engagement is a key factor in helping to develop Practical Solutions. Practical Solutions are found when all stakeholders work together to identify the purpose of action, assess data from all parts of the system, and examine a range of options before investment decisions are made. A new Corridor Sketch process is being used to present a range of strategies developed through performance-based planning. The Washington State Department of Transportation (WSDOT) is working on developing these sketches across the state to identify practical strategies and solutions that reflect a community's character.

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<sup>2</sup> <http://www.wsdot.wa.gov/Projects/PracticalDesign/>

WSDOT has implemented supporting policies and training for the agency's workforce and is using new tools to keep existing assets in good condition. The Practical Solutions approach will continue to evolve as WSDOT works with partners, communities, citizens, and businesses to find ways to bring low-cost, effective solutions to keep transportation vital for generations to come.

### 8.2.1 Moving Toward an Integrated System: Practical Solutions<sup>3</sup>

Integrating all forms of transportation to meet growing community needs is essential in an era of fewer resources. As demonstrated by recent legislation, planning goals, and directives, transportation providers at the state, regional, and local levels must plan, fund, design, build, and operate a transportation system for the 21st century.

This message is reinforced in a 2014 National Cooperative Highway Research Program report that suggests states change to “a maturity model in which DOTs enhance their ability to support sustainability by gradually shifting toward broad decision-making partnerships, risk-sharing between public and private sectors, integrated infrastructure ownership and operations strategies and sustainability-focused stewardship and regulation” that is routine and institutionalized throughout the state.

Transportation system integration requires all partners to pull from a larger, multimodal toolbox to consider solutions that can best serve the interests of communities and the traveling public. Highways and streets need to be considered as not just a stretch of roadway, but as a community asset with transit facilities and services; bicycle and pedestrian connections; major employment, education, social service, and residential destinations; and other aspects that affect and respond to the needs of people and communities around it. For WSDOT and local partners, this means a continued evolution from a focus on a single roadway, highway, or transit route toward collaboration focused on transportation system performance and thriving communities.

WSDOT's Practical Solutions approach facilitates more flexible and sustainable transportation investment decisions at every step in the transportation lifecycle, from planning and investment through design, construction, and operation.

WSDOT employees were recently directed to adopt the Practical Solutions approach via Secretary's Executive Order Number E1096.00:

*The citizens of Washington expect the delivery of transportation services, programs, and projects that are necessary, high quality, appropriately scoped, and delivered efficiently at the right time and in the right location. In meeting this expectation, our systems must be sustainable. Recognizing this importance requires maintaining, preserving, and operating systems to achieve lowest lifecycle cost. When this cannot be achieved within a constrained budget, a process that considers cross asset tradeoffs that balance between performance and risks is necessary. The department is expected to develop clear base line condition assessments and identify quantifiable, evidence-based performance outcomes and predictable, consistent processes for planning, developing, and delivering projects to facilitate safety, mobility, and economic vitality, while promoting local business and jobs and providing for stewardship of the environment. The goal here is to maximize safety, enhance mobility, and encourage economic development through*

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<sup>3</sup> Washington State Public Transportation Plan, June 2016

*optimization of the transportation system at the lowest cost for as many communities as possible.*

## 8.3 Airport Land-Use Policy Overview<sup>4</sup>

The *WSDOT Airports and Compatible Land Use Guidebook* identifies policies local jurisdictions should consider when examining land-use topics.

### 8.3.1 Multimodal Transportation Policy

Identify, preserve, and enhance, through interjurisdictional planning, goals, policies, and development regulations that promote significant regional transportation linkages and multimodal connections to and from aviation facilities and employment centers.

### 8.3.2 Economic Policy

- Encourage economic development opportunities and aviation-related uses adjacent to airports and promote the efficient mobility of goods and services region-wide consistent with the economic development element and the regional transportation strategy.
- Protect the viability of the airport as a significant economic resource to the community by encouraging compatible land uses and densities and reducing hazards that may endanger the lives and property of the public and aviation users.

### 8.3.3 Public Health and Safety Policy

- Encourage the protection of the airport from adjacent incompatible land uses or activities that could impact the present and future use of the airport as an Essential Public Facility, endanger the lives of people on the ground, and promote inadvertent growth of incompatible land uses. Incompatible land uses may include residential, multi-family, height hazards, uses that attract large concentrations of people, wildlife hazards, and special uses, such as schools, hospitals and nursing homes, and explosive/hazardous materials.
- Ensure that the airport is protected from incompatible uses consistent with WSDOT Aviation Airport and Land Use Compatibility guidelines and best management practices.
- Recognize the airport as an essential public facility and discourage land uses that may promote incompatible development adjacent to it.
- Promote the safe operation of aviation facilities by encouraging compatible land uses and activities and discouraging uses or activities that will impede safe flight operations or endanger the lives of people on the ground.

In 1996 Washington amended the Growth Management Act and the planning enabling legislation to

- Require all towns, cities, and counties to discourage encroachment of incompatible development adjacent to public-use airports through adoption of comprehensive plans and development regulations.
- Require local jurisdictions to consult formally with aviation stakeholders.
- Charge WSDOT Aviation Division with providing technical assistance and participating in formal consultation.

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<sup>4</sup> *WSDOT Airports and Compatible Land Use Guidebook*, January 2011

- Identify airports as essential public facilities.

Uses that are incompatible when located adjacent to an airport, depending on a public-use airport's characteristics, location, and geography, may include:

- Residential development
- Wildlife hazards
- Height hazards
- Large public assembly facilities
- Special function land uses
- Light/glare
- Electronic signals
- Storage of hazardous/explosive material

#### 8.3.4 Formal Consultation

Local jurisdictions are required to consult formally with WSDOT Aviation, airport owners, managers, private airport operators, general aviation pilots, and ports prior to adopting comprehensive plan policies or development regulations that may affect property adjacent to public-use airports. WSDOT Aviation recommends that local jurisdictions initiate formal consultation as early as possible in the planning process. This is to ensure that all parties have an opportunity to work together to find comprehensive solutions of mutual benefit that fulfill the intent of the legislation, consistent with local jurisdictions' land use planning authorities and obligations under law.

#### 8.3.5 Requirements

- Include goals or policies that discourage incompatible uses (required).
- Describe all airport facilities and operations in the transportation inventory (required for airport sponsors).
- Recognize the airport as an essential public facility.

#### 8.3.6 Recommendations

- Include an airport layout plan map of the airport facility.
- Include a map of the identified airport influence area.
- Include a map of the Federal Aviation Regulations Part 77 imaginary airspace surfaces.
- Include a description of the airport facility and policies that recognize the significance and benefit of the airport as a transportation hub as well as its importance for economic development.
- Include policies that recognize the benefit of airports for emergency medical and disaster response in the community.
- Adopt airspace and land use development regulations to implement comprehensive plans.

Development tools may include direct zoning, airspace overlays, and overlays for addressing specific activities in an underlying zone that may negatively impact compatibility and airport operations.